United States Patent [19]

Malette et al.

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[54] **METHOD OF ACHIEVING HEMOSTASIS, INHIBITING FIBROPLASIA, AND PROMOTING TISSUE REGENERATION IN A TISSUE WOUND**

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[*] Notice: The portion of the term of this patent subsequent to Jul. 19, 2000 has been disclaimed.

[21] Appl. No.: **440,039**

[22] Filed: **Nov. 8, 1982**

Related U.S. Application Data

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[51] **Int. Cl.**[3] **A61K 31/70**; A61B 17/04

[52] **U.S. Cl.** ..... **514/55**; 128/334 R; 424/95

[58] **Field of Search** ..... 424/95, 180; 3/1.4; 128/334 R

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[57] **ABSTRACT**

The method of achieving hemostasis, inhibiting fibroplasia, and promoting tissue regeneration is described wherein a chitosan solution, or water-soluble chitosan in various solid forms is placed in contact with the tissue wound. The chitosan forms a coagulum which prevents bleeding and negates the formation of a blood clot thereby preventing the formation of fibrin strands. The prevention of the formation of fibrin strands prevents the proliferation of fibroblasts and the synthesis of collagen thereby allowing the promotion of normal tissue regeneration. The process described hereinabove results in wound healing with minimal scar formation. The use of chitosan in grafts is contemplated as well as the use of polyglucosamine in wound healing.

16 Claims, 1 Drawing Figure